

Applicant: Katrina Schmidt
Application Serial No.: 10/644,450

IN THE CLAIMS:

The following is a complete listing of the claims having the status as indicated:

Claims 1-25 (Cancelled)

26. **(Currently Amended).** A polyurethane foam for insulating structures that is produced from a polyurethane spraying system, ~~is open celled, and has a density of less than 1 pound per cubic foot and low water absorption~~, said polyurethane foam being the reaction product of:

a) a resin component comprising;

a blowing agent present in an amount of from 15 to 40 parts by weight based on 100 parts by weight of said resin component,

a first polyol used in an amount of from 5 to 25 parts by weight based on 100 parts by weight of said resin component and having a number-average molecular weight of from 150 to 500 and having a hydroxyl number of from 250 to 1000 and having at least tetra-functionality,

a second polyol having a number-average molecular weight of from 3500 to 8000 and having a hydroxyl number of from 20 to 100 and having terminal hydroxyl groups, and

a curing component used in an amount of from 2 to 15 parts by weight based on 100 parts by weight of said resin component and comprising a polyether amine having at least one primary amine group, an equivalent hydroxyl number of from 20 to 800, and having a number-average molecular weight of from 150 to 5000, and

Applicant: Katrina Schmidt
Application Serial No.: 10/644,450

b) an isocyanate component comprising diphenylmethane diisocyanate; wherein said a) and b) are reacted in a volumetric ratio having an isocyanate index of from 25 to 60; and

wherein said polyurethane foam is open-celled and has a density of less than 1 pound per cubic foot and low water absorption as a result of reacting said a) and b) in said volumetric ratio at said isocyanate index.

27. **(Cancelled).**

28. **(Original).** A polyurethane foam as set forth in claim 26 wherein said polyurethane foam has a water absorption of less than 10 percent by volume of said polyurethane foam.

29. **(Original).** A polyurethane foam as set forth in claim 26 wherein said polyurethane foam has a water absorption of less than 5 percent by volume of said polyurethane foam.

30. **(Cancelled).**

31. **(Original).** A polyurethane foam as set forth in claim 26 wherein said curing component has a number average molecular weight of from 250 to 2500.

32. **(Cancelled).**

33. **(Cancelled).**

34. **(Original).** A polyurethane foam as set forth in claim 26 wherein said first polyol is further defined as an aliphatic, amine-initiated polyol.

35. **(Cancelled).**

Applicant: Katrina Schmidt
Application Serial No.: 10/644,450

36. **(Original).** A polyurethane foam as set forth in claim 26 wherein said second polyol is used in an amount of from 5 to 25 parts by weight based on 100 parts by weight of said resin component.

37. **(Original).** A polyurethane foam as set forth in claim 26 wherein said second polyol is further defined as a triol.

38. **(Original).** A polyurethane foam as set forth in claim 26 wherein said second polyol is further defined as a diol.

39. **(Currently Amended).** A method of forming a polyurethane foam for insulating structures dispensed from a polyurethane spraying system, ~~wherein the polyurethane foam has a density of less than 1 pound per cubic foot and low water absorption~~, said method comprising the steps of:

providing a) a resin component including a blowing agent present in an amount of from 15 to 40 parts by weight based on 100 parts by weight of said resin component, a first polyol present in an amount of from 5 to 25 parts by weight based on 100 parts by weight of said resin component and having a number-average molecular weight of from 150 to 500, having a hydroxyl number of from 250 to 1000, and having at least tetra-functionality, a second polyol having a number-average molecular weight of from 3500 to 8000, having a hydroxyl number of from 20 to 100, and having terminal hydroxyl groups, and a curing component present in an amount of from 2 to 15 parts by weight based on 100 parts by weight of said resin component and comprising a polyether amine having at least

Applicant: Katrina Schmidt
Application Serial No.: 10/644,450

one primary amine group, an equivalent hydroxyl number of from 20 to 800, and having a number-average molecular weight of from 150 to 5000,

providing b) an isocyanate component comprising diphenylmethane diisocyanate; and

reacting a) and b) in a volumetric ratio of from 1:1.2 to 1:3 such that a) and b) are reacted having an isocyanate index of from 25 to 60 such that the polyurethane foam is open-celled and has a density of less than 1 pound per cubic foot and low water absorption as a result of reacting a) and b) in the volumetric ratio at the isocyanate index.

40. **(Cancelled).**

41. **(Original).** A method as set forth in claim 39 wherein the step of reacting a) and b) is further defined as spraying a) and b).

42. **(Original).** A method as set forth in claim 41 wherein the step of spraying a) and b) is further defined as mixing a) and b) through a nozzle of a spray gun.

43. **(Cancelled).**

44. **(Original).** A method as set forth in claim 39 wherein the curing component has a number average molecular weight of from 250 to 2500.

45. **(Cancelled).**

46. **(Cancelled).**